

Performance Data:

Curved Duct Grille - Fixed Blade Data

Model: CDG-HF

Free area Square Feet Per Lineal Foot	Nominal duct width (Inches)	SP (Inch w.g.)	0.01	0.022	0.039	0.062	0.087	0.119	0.156	0.198	0.245
0.069	2	CFM per Foot	27	41	55	69	82	96	110	124	138
		NC	-	-	14	20	26	31	35	38	42
		T, Sill or Floor	2-2-2	6-6-6	8-8-9	11-12-13	13-14-16	15-17-19	18-20-22	21-22-23	22-23-24
		Side Wall	4-6-9	6-9-12	8-12-17	11-16-22	13-19-25	15-21-28	18-25-32	21-28-36	22-30-39
0.085	2.5	CFM per Foot	32	51	68	85	101	118	136	153	170
		NC	-	-	15	21	27	32	36	39	42
		T, Sill or Floor	2-2-2	7-7-7	10-10-11	12-13-15	15-16-18	18-19-21	20-22-24	24-24-25	26-26-27
		Side Wall	5-7-10	7-11-15	10-14-19	12-17-23	15-21-27	18-24-31	20-27-34	24-31-39	26-34-41
0.105	3	CFM per Foot	41	63	83	105	126	146	168	188	210
		NC	-	-	16	22	28	33	37	40	43
		T, Sill or Floor	3-3-3	8-8-8	12-12-12	15-15-16	18-19-20	20-21-22	23-24-25	25-26-27	29-29-29
		Side Wall	5-7-10	9-12-16	12-16-20	15-20-25	18-23-28	20-26-32	23-29-36	25-32-39	29-36-43
0.121	3.5	CFM per Foot	47	72	95	121	145	163	193	216	242
		NC	-	-	16	22	28	33	37	40	43
		T Sill or Floor	3-3-3	8-8-8	12-12-12	15-15-16	18-19-20	20-21-22	23-24-25	25-26-27	29-29-29
		Side Wall	5-7-10	9-12-16	12-16-20	15-20-25	18-23-28	20-26-32	23-29-36	25-32-39	29-36-43
0.141	4	CFM per Foot	55	84	111	141	169	195	225	252	282
		NC	-	-	17	23	29	34	38	41	44
		T, Sill or Floor	3-3-3	9-9-9	13-13-13	16-16-17	20-20-21	22-23-24	24-25-26	28-28-28	31-31-31
		Side Wall	6-8-11	10-13-17	13-17-21	16-21-26	20-25-31	22-28-34	24-30-37	28-35-41	31-38-45
0.177	5	CFM per Foot	71	106	142	177	212	248	283	318	354
		NC	-	10	18	24	30	35	39	42	45
		T, Sill or Floor	4-4-4	10-10-10	15-15-15	18-18-18	22-22-23	25-25-25	27-27-28	30-30-30	34-34-34
		Side Wall	8-10-13	11-14-18	15-19-23	18-22-27	22-27-32	25-31-37	27-33-39	30-37-43	34-41-47
0.213	6	CFM per Foot	85	127	170	212	254	293	339	382	425
		NC	-	11	20	25	31	36	40	43	46
		T, Sill or Floor	5-5-5	10-10-10	15-15-15	18-18-18	22-22-22	24-24-24	28-28-28	30-30-30	35-35-35
		Side Wall	8-10-13	12-15-19	16-19-24	19-23-28	23-28-34	27-32-38	29-34-39	33-39-44	34-42-47
0.286	8	CFM per Foot	115	171	229	286	342	400	457	513	571
		NC	-	12	21	26	31	36	41	44	47
		T, Sill or Floor	6-6-6	11-11-11	16-16-16	19-19-19	23-23-24	25-25-25	29-29-29	31-31-31	36-36-37
		Side Wall	9-11-14	13-16-20	16-20-24	19-24-29	23-29-35	26-33-39	29-35-40	33-39-45	37-43-48

CFM: Cubic feet per minute
 FPM: Feet per minute
 TP: Total pressure (inch w. g.)
 T: Throw in feet

Performance Notes:

- Throws are given at 150, 100 and 50 feet per minute terminal velocity
- Noise criteria values based on 10dB room absorption, re 10⁻¹² watt

Performance Data:

Curved Duct Grille - Single and Double Deflection Supply Data

Model: **CDG-HA, CDG-HVA**

Grille Size (Inch)		Minimum Duct Diameter Required	Grille Core Area (ft 2)	Vel Press, Pv (Inch w.g.)		0.01	0.01	0.02	0.02	0.03	0.04	0.05	0.06															
Nom Width W	Nom Height H			Core Velocity (fpm)		300	400	500	600	700	800	900	1000															
				PT (Inch w.g.)	0°		0.02		0.03		0.04		0.05															
					0.02		0.04		0.06		0.09		0.12		0.16													
					0.03		0.05		0.08		0.11		0.15		0.19													
				45°		0.06		0.09		0.13		0.18		0.23														
				CFM		50		70		90		110		130														
				NC		<20		<20		<20		23		28														
				Throw	0°		4		5		10		5		7													
					12		6		9		13		7		11													
					15		8		11		15		8		11													
				22.5°		3		4		7		4		5														
				45°		2		3		5		3		4														
12	3	6" ø	0.18	CFM		80		100		130		160		180		210		230		260								
				NC		<20		<20		20		25		29		33		37		40		44						
				Throw	0°		4		6		13		6		8		14		7		11		16					
					22.5°		3		4		7		4		5		9		5		7		10					
					45°		2		3		5		3		4		7		3		5		7					
				12	4	8" ø	0.26	CFM		80		100		130		160		180		210		230		260				
								NC		<20		<20		20		25		29		33		37		40		44		
								Throw	0°		4		6		13		6		8		14		7		11		16	
									22.5°		3		5		9		4		6		10		5		8		12	
									45°		2		3		7		3		5		8		4		6		9	
18	3	6" ø	0.28					CFM		80		110		140		170		190		220		250		280				
								NC		<20		<20		20		25		30		34		37		40		44		
								Throw	0°		4		6		13		6		9		15		8		11		16	
									22.5°		3		5		9		4		7		11		6		8		12	
									45°		2		3		7		3		5		8		4		6		9	
				10	6	10" ø	0.34	CFM		100		140		170		210		240		270		310		340				
								NC		<20		<20		21		26		31		34		38		41		45		
								Throw	0°		5		7		14		7		10		16		8		11		18	
									22.5°		4		5		10		5		7		12		6		9		13	
									45°		3		4		8		4		5		9		5		7		10	
24	3	6" ø	0.37					CFM		110		150		190		220		260		300		340		370				
								NC		<20		<20		21		27		31		35		38		41		45		
								Throw	0°		5		8		15		7		11		17		9		13		19	
									22.5°		4		6		11		5		8		12		7		10		14	
									45°		3		4		8		4		6		9		5		7		10	
				18	4	8" ø	0.40	CFM		120		160		200		240		280		320		360		400				
								NC		<20		<20		22		27		31		35		39		42		46		
								Throw	0°		6		8		15		7		11		18		9		13		19	
									22.5°		4		6		11		5		8		12		7		10		14	
									45°		3		4		8		4		6		9		5		7		10	
10	8	14" ø	0.47					CFM		140		190		240		280		330		380		430		470				
								NC		<20		<20		22		28		32		36		39		42		46		
								Throw	0°		6		8		16		8		12		19		10		15		22	
									22.5°		4		6		12		6		9		14		7		11		16	
									45°		3		5		9		4		7		10		5		8		12	
				14	6	10" ø	0.49	CFM		150		200		250		290		340		390		440		490				
								NC		<20		<20		22		28		32		36		39		42		46		
								Throw	0°		6		9		17		8		12		20		10		15		22	
									22.5°		5		7		12		6		9		14		7		11		16	
									45°		3		5		9		4		7		11		5		8		12	
24	4	8" ø	0.54					CFM		160		210		270		320		380		430		480		540				
								NC		<20		<20		23		28		33		36		40		43		47		
								Throw	0°		6		9		18		8		12		20		11		15		23	
									22.5°		5		7		13		6		9		15		8		11		17	
									45°		3		5		10		5		7		11		6		8		13	
				36	3	6" ø	0.57	CFM		170		230		280		340		400		450		510		570				
								NC		<20		<20		23		28		33		37		40		43		47		
								Throw	0°		6		10		18		8		13		21		11		15		23	
									22.5°		5		7		13		6		9		15		8		11		17	
									45°		3		5		10		5		7		12		6		8		13	
18	6	10" ø	0.64					CFM		190		260		320		380		450		510		570		640				
								NC		<20		<20		24		29		33		37		41		44		48		
								Throw	0°		7		10		19		9		14		22		11		15		23	
									22.5°		5		7		14		7		10		16		8		12		18	
									45°		4		5		10		5		8		12		6		9		13	
				14	8	14" ø	0.68	CFM		200		270		340		410		470		540		610		680				
								NC		<20		<20		24		29		34		37		41		44		48		
								Throw	0°		7		11		20		9		14		23		12		17		25	
									22.5°		5		8		14		7		10		17		9		13		19	
									45°		4		6		11		5		8		13		7		10		14	
12	10	16" ø	0.73					CFM		220		290		370		440		510		590		660		730				
								NC		<20		<20		24		29		34		38		41		44		48		
								Throw	0°		7		11		20		10		14		24		12		17		25	
									22.5°		5		8		15		7		10		17		9		13		19	
									45°		4		6		11		5		8		13		7		10		15	

Throw

The numbers shown are throw distances, in feet, measured along the jet trajectory axis relating to terminal velocities of 150,100,& 50 fpm.

Terminal velocity is the air speed, in feet per minute, measured in the supplyair stream.

Pressure

Pt, represents total pressure for the grille. Total pressure can be calculated as

Pt= Ps+ Pv

Pv, is the air velocity pressure in the duct and is calculated as Pv=

(Velocity/4005)2

All pressures are stated and calculated in inches of water

Noise

NC shown is for 0°blade angle setting and is noise criteria curve that will not be exceeded at the operating point.

For 22.5°blade anglesetting, add 2 NC to the tabulated value shown. For for 45°blade anglesetting, add 6 NC to the tabulated value shown.

Performance Data:

Curved Duct Grille - Return Air Data

Model: CDG-HF, CDG-HA, CDG-HVA

Nominal Size (inch)		Core Area (ft2)	Core Velocity (fpm)	400	500	600	700	800	900	1000	1100
W Width	H Height		Ps (Inch w. g.)	-0.03	-0.05	-0.07	-0.1	-0.13	-0.17	-0.21	-0.25
6	3	0.07	CFM	30	30	40	50	60	60	70	80
			NC	<20	<20	<20	<20	<20	21	23	26
12	3	0.15	CFM	60	80	90	110	120	140	150	170
			NC	<20	<20	<20	<20	21	24	27	29
18	3	0.24	CFM	90	120	140	170	190	210	240	260
			NC	<20	<20	<20	<20	23	26	29	31
24	3	0.32	CFM	130	160	190	220	260	290	320	350
			NC	<20	<20	<20	20	24	27	30	33
30	3	0.40	CFM	160	200	240	280	320	360	400	440
			NC	<20	<20	<20	21	25	28	31	34
6	4	0.10	CFM	40	50	60	70	80	90	100	110
			NC	<20	<20	<20	<20	<20	22	25	28
12	4	0.23	CFM	90	110	140	160	180	210	230	250
			NC	<20	<20	<20	<20	22	26	29	31
18	4	0.35	CFM	140	180	210	250	280	320	350	390
			NC	<20	<20	<20	21	24	28	30	33
24	4	0.48	CFM	190	240	290	340	380	430	480	530
			NC	<20	<20	<20	22	26	29	32	34
30	4	0.60	CFM	240	300	360	420	480	540	600	660
			NC	<20	<20	<20	23	27	30	33	35
6	6	0.17	CFM	70	90	100	120	140	160	170	190
			NC	<20	<20	<20	<20	21	24	27	30
12	6	0.38	CFM	150	190	230	270	310	340	380	420
			NC	<20	<20	<20	21	25	28	31	33
18	6	0.59	CFM	240	300	350	410	470	530	590	650
			NC	<20	<20	<20	23	27	30	33	35
24	6	0.80	CFM	320	400	480	560	640	720	800	880
			NC	<20	<20	20	24	28	31	34	37
30	6	1.01	CFM	400	500	600	700	810	910	1010	1110
			NC	<20	<20	21	25	29	32	35	38
12	8	0.53	CFM	210	270	320	370	430	480	530	590
			NC	<20	<20	<20	22	26	29	32	35
18	8	0.83	CFM	330	410	500	580	660	740	830	910
			NC	<20	<20	20	24	28	31	34	37
24	8	1.12	CFM	450	560	670	780	890	1010	1120	1230
			NC	<20	<20	21	26	29	33	35	38
30	8	1.41	CFM	560	700	850	990	1130	1270	1410	1550
			NC	<20	<20	22	27	30	34	36	39
12	10	0.69	CFM	280	340	410	480	550	620	690	760
			NC	<20	<20	<20	24	27	30	33	36
18	10	1.06	CFM	430	530	640	740	850	960	1060	1170
			NC	<20	<20	21	25	29	32	35	38
24	10	1.44	CFM	580	720	860	1010	1150	1290	1440	1580
			NC	<20	<20	23	27	30	34	37	39
30	10	1.81	CFM	730	910	1090	1270	1450	1630	1810	1990
			NC	<20	<20	24	28	31	35	38	40
12	12	0.84	CFM	340	420	500	590	670	760	840	920
			NC	<20	<20	20	24	28	31	34	37
18	12	1.30	CFM	520	650	780	910	1040	1170	1300	1430
			NC	<20	<20	22	26	30	33	36	39
24	12	1.76	CFM	700	880	1050	1230	1410	1580	1760	1930
			NC	<20	<20	23	28	31	35	37	40
30	12	2.22	CFM	890	1110	1330	1550	1770	1990	2220	2440
			NC	<20	<20	24	29	32	36	38	41

Pressure

Ps, represents static pressure requirement. Total pressure can be calculated as $P_t = P_v + P_s$

Pv, is the air velocity pressure in the duct and is calculated as $P_v = (Velocity/4005)^2$

All pressures are stated and calculated in inches of water.

Noise

NC is noise criteria curve that will not be exceeded at the operating point. This is determined by assuming a 10dB (ref: 10-12watts) room attenuation that is subtracted from the power levels in each of the 2nd thru 7th octave bands